

LATUKHOVA, A. G.

GORBUNOV, N.S.; LATUKHOVA, A.G.

Diffusion copper plating. Zhur.prikl.khim. 30 no.1:81-83 Ja '57.  
(MLRA 10:5)

1. Institut fizicheskoy khimii Akademii nauk SSSR.  
(Copper plating)

TURKEL'TAUB, N.M.; SHCHVARTSMAN, V.P.; KANCHEYEVA, O.A.; LATUKHOVA, A.G.;  
KOLYUBYAKINA, A.I.

Use of thermodynamic apparatus in gas surveys. Trudy VNIGI no.11:  
260-272 '58. (MIRA 13:1)  
(Gases---Analysis) (Geochemical prospecting)



34542

S/659/61/007/000/030/044  
D217/D303

1.1800

AUTHORS: Gorbunov, N.S., Kovalev, Ye.A., and Latukhova, A.G.

TITLE: Investigating diffusion coatings resistant to media containing vanadium pentoxide

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Issledovaniya po zharoprochnym splavam, v. 7, 1961, 263 - 270

TEXT: In this investigation, in which the service conditions of gas transport turbines were simulated, the excess pressure of the working process and the speed of gas flow were not allowed for. The work was carried out at the Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry AS USSR) and at the Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta (All Union Scientific Research Institute of Railway Transportation) in association with the Kolomenskiy teplovozostroitel'nyy zavod im. Kuybyshev (Kolomensk Internal Combustion Works im. Kuybyshev). Diffusion coatings were produced on the surface of the austenitic class chromium-nickel steel ЭИ 417 (EI417), from which flat speci-

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mens, 15 x 10 x 6 mm were made. Silicide diffusion coatings were produced at 1000, 1020 and 1050°C by soaking for 2 - 6 hours. Aluminizing was carried out at 1000 and 1100°C, soaking for 4 - 6 hours and chromiding in vacuum at 1000°C for 4 ... 6 hours. 730°C was selected as the temperature for corrosion testing, this being the maximum service temperature for guide vanes of a gas turbine. To select the mode of application of the corrosive mixture to the specimens, at which the rate of corrosion of the specimens at elevated temperatures should approach the intensity of destruction of the alloys in the course of service of the gas turbine plant, two methods were investigated: Immersion of the specimens in molten cinder and application of a suspension to the specimens at room temperatures (painting). On testing the above coatings in an atmosphere of air in contact with cinder (10 and 41.6 %  $V_2O_5$ ) at 730°C, silicided specimens exhibited the greatest resistance against corrosion by vanadium pentoxide. The resistance of aluminized and aluminosilicided specimens was lower. All coatings, apart from silicided ones, failed on testing for 500 hours in contact with cinder at 730°C. The corrosive medium diffused through the coating to the me-

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tal, oxidizing the latter at the boundary line of diffusion. The thickness of a silicided layer under similar conditions decreased somewhat and pitting corrosion appeared on the surface; however, molten cinder did not penetrate to the metal and the latter did not corrode. In the presence of  $\text{SiO}_2$  in air atmosphere, the rate of

corrosion of alumino-silicided and aluminized specimens is the same as the rate of corrosion in pure air. Chromided and silicided specimens exhibit high stability under these conditions. A combination cementation coating (Si and Al) gave less protection to the steel EI417 against vanadium pentoxide than a coating consisting of one of the individual elements. On periodically cooling the specimens (cooling 40 times from 730 to 20°C within 15-20 minutes), no exfoliation and destruction of the protective layer of chromided and silicided specimens occurred. No cracks or ruptures in the diffusion layer were observed on water quenching silicided specimens from 1150°C and the adhesion of the coating to the base metal remained unimpaired. Siliciding and chromiding are recommended for protection of gas vanes of gas turbine plants against corrosion during combustion of sulphur-containing petroleum residues of high

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vanadium content. There are 5 figures, 2 tables and 11 references; 3 Soviet-bloc and 8 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: Corrosion, 11 no. 1, p. 35, 1955; Iron and Steel Inst., 179, no. 4, p. 342, 1955; Corrosion, 12, no. 9, pp. 49-54, 1956; Iron and Steel Inst., 182, no. 2, p. 195, 1956.

X

Card 4/4

L 15752-66 EWT(m)/T/EWP(t)/EWP(b) I&P(c) JD/GS

ACC NR: AT5027957 SOURCE CODE: UR/0000/65/000/000/0216/0218

AUTHOR: Gorbunov, N. S. (Doctor of chemical sciences); Latukhova, A. G.; Klevtsur, S. A.; Pavlova, V. A.

ORG: none 60  
B+1

TITLE: Diffusion of silicon coatings on copper ✓

SOURCE: Seminar po zharostoykim pokrytiyam. Leningrad, 1964. Zharostoykiye pokrytiya (Heat-resistant coatings); trudy seminar. Leningrad, Izd-vo Nauka, 1965, 216-218

TOPIC TAGS: electrolyte, copper, silicon, internal stress, crystal lattice structure

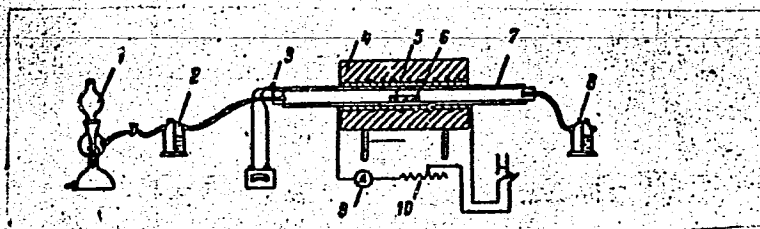
ABSTRACT: Electrolytically applied coatings on copper suffered large internal stresses during abrupt variations of temperature. This resulted in the cracking and peeling off of the coatings. Experiments on the diffusion coating of copper disk samples were made in the flow of dried hydrogen in an apparatus (see fig.) consisting of a Kipp generator 1 for the production of H by the reaction of

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AGC NR: AT5027957



metallic zinc with  $H_2SO_4$ ; Tishchenko flasks 2 and 8, containing  $H_2SO_4$ ; a Pt-PtRh thermocouple 3 with a galvanometer; a tubular electric resistance furnace 4; a container 5 with samples 6; a metallic tube 7; an amperometer 9; and a rheostat 10. Ground ferrosilicide with an addition of 1-5% ammonium chloride was used for coating the copper samples. The silicon coatings obtained were dense, had a silver mat surface, and their thickness depended on the time and temperature of coating ( $\sim 200$  and  $400 \mu$  after coating for 4 hr at  $700^\circ C$  and  $750^\circ C$ , respectively). An X-ray diffraction study showed that the diffusion layer consisted entirely of the  $Cu_5Si$  phase, having a cubic structure with a lattice parameter of  $a = 6.30 \text{ \AA}$ . Orig. art. has: 2 figures and 1 table.

SUB CODE: 11,20/ SUBM DATE: 20Jul65/ NR REF SOV: 000/ OTHER: 000  
2/2 Syn

3 (9)

AUTHOR:

Latun, V. S.

SOV/50-59-8-8/19

TITLE:

Calculation of Level in Wind Tides and Wind Back Tides in the Taganrogskiy Gulf (Raschet urovnya pri sgonakh i nagonakh v Taganrogskom zalive)

PERIODICAL:

Meteorologiya i gidrologiya, 1959, Nr 8, pp 29 - 31 (USSR)

ABSTRACT:

The Taganrogskiy Gulf has a length of 120 km, a width of 32 km and a depth of 6 m. The stretched form of the shallow-water gulf permits the calculation of the wind tides in this gulf to be regarded as a plane task of hydrodynamics. The level variations are expressed in such a case by ordinary differential equations with constant coefficients. The equation (1) of B. A. Tareyev (Ref 2), and the equation (2) of G. I. Gershengorn, are used for this purpose. Both are similar in structure, but not identical. Tareyev investigates the turbulent friction in the liquid, Gershengorn the friction on the bottom. Calculation formulas are derived from these two equations, and the results of calculations carried out by them are compared. The equations (1) and (2) are only applicable to closed basins. At the open end of the Taganrogskiy Gulf, an amplitude of level variations amounting to only one-tenth of those in the upper

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Calculation of Level in Wind Tides and Wind Back  
Tides in the Taganrogskiy Gulf

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part of the gulf, are observed at wind tides and wind back tides. Formula (5) is derived from formula (2), and formulas (6a), (6b) and (6v) are derived from (1). 7 observations of wind tides and wind back tides are used to check these formulas. The results calculated by the formulas derived are put forward in figures 1 and 2, partly in form of a diagram. With their help it is shown that formula (5) yields a result nearly equal to reality, while among the formulas (6) the formula (6b) proves to be the best one. The calculations put forward allow the conclusion that the coefficient  $m$  of the variation damping with

$m = 0.12 \frac{1}{\text{hour}}$ , and the kinematic coefficient  $\nu$  of the horizontal turbulent exchange with  $\nu = 9.4 \cdot 10^8 \text{ cm}^2/\text{sec}$ , are characteristic of the Taganrogskiy Gulf. There are 2 figures and 2 Soviet references.

Card 2/2

LATUN, V.S.

Nature of the relation between the coefficient of horizontal  
turbulent mixing in the sea and the averaged period of current  
velocity pulsations. Meteor. i gidrol. no. 7:35-36 J1 '60.  
(MIRA 13:7)

(Ocean currents)

IATUN, V.S.

Joint Moscow Seminar on the Dynamics of the Sea.. Meteor. i  
gidrol. no.9:65-66 S '61. (MIRA 14:8)  
(Ocean currents)

LATUN, V.S.

Upwelling of deep waters near the coast of south-western Africa.  
Izv. AN SSSR. Ser. geofiz. no.9:1229-1239 S '62. (MIRA 15:8)

1. Gosudarstvennyy okeanograficheskiy institut.  
(Atlantic Ocean--Ocean currents)

LATUN, V.S.

Vertical movement at a zero surface depth in the Atlantic  
Ocean. Okeanologiya 3 no.2:206-212 '63. (MIRA 16:4)  
(Atlantic Ocean—Ocean currents)

LATUN, V.S.

Meridional shift below the zero surface. Izv. AN SSSR. Ser.  
geofiz. no.8:1251-1258 Ag '63. (MIRA 16:9)

1. Gosudarstvennyy okeanograficheskiy institut. Predstavleno  
chlenom redaktsionnoy kollegii Izvestiy AN SSSR, Seriya  
geofizicheskaya, S.V.Dobroklonskim.  
(Ocean currents)



LATUN, V.S.

Dynamics of deep currents below the layer of no motion.  
Trudy GOIN no.85:12-17 '65. (MIRA 19:1)

LATUN, V.S.

Dynamics of deep currents below the zero level. Okeanologia 4  
no. 5:91 '64 (MIRA 18:1)

L 35997-66 EWT(1) GW

ACC NR: AT6016535

SOURCE CODE: UR/2634/65/000/085/0012/0017

AUTHOR: Latun, V. S.

ORG: None

TITLE: The dynamics of deep currents below the zero level

SOURCE: Moscow. Gosudarstvennyy okeanograficheskiy institut. Trudy, no. 85, 1965. Teoriya i metody raschetov techeniy i neperiodicheskikh kolebaniy urovnya i prilivov (Theory and methods of calculating currents and acyclic fluctuations of water level and tides), 12-17

TOPIC TAGS: ocean current, ocean dynamics, fluid flow, fluid velocity

ABSTRACT: This paper presents improvements of the original model published earlier by the author (Okeanologiya, no. 2, 1963). The earlier boundary conditions, imposed on densities at  $z = 0$  and  $z = \text{depth of the channel } D$ , are now replaced by the new velocity condition  $v = 0$  at the bottom ( $z = D$ ). The newly obtained solutions for densities and velocities, presented in the paper, are compared with the experimental data on deep sea currents in the Gulf Stream region and the western North Atlantic Ocean and are found in good qualitative

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ACC NR: AT6016535

agreement. This indicates that the new velocity condition leads to a substantial improvement of the initial theoretical model. Orig. art. has: 18 formulas and 2 figures.

SUB CODE: 08, 20/ SUBM DATE: 00/ ORIG REF: 002/ OTH REF: 002

Card

2/2

CHERNIN, N.I.  
 BENESHEVICH, I.I., kandidat tekhnicheskikh nauk; BOGIN, N.H., kandidat tekhnicheskikh nauk; BYKOV, Ye.I., inzhener; VLASOV, I.I., kandidat tekhnicheskikh nauk; GRITSEVSKIY, M.Ye., inzhener; GRUBER, L.O., inzhener; GURVICH, V.G., inzhener; DAVYDOV, V.N., inzhener; YER-SHOV, I.M., kandidat tekhnicheskikh nauk; ZASORIN, S.N., kandidat tekhnicheskikh nauk; IVANOV, I.I., kandidat tekhnicheskikh nauk; KRAUKLIS, A.A., inzhener; KRUZOV, L.B., inzhener; LAPIN, V.B., inzhener; LASTOVSKIY, V.P., dotsent; LATUNIN, N.I., inzhener; MARKVARDT, K.G., professor, doktor tekhnicheskikh nauk; MAKHAYLOV, M.I., professor, doktor tekhnicheskikh nauk; NIKANOROV, V.A., inzhener; OSKOLKOV, E.N., inzhener; OKHOSHIN, L.I., inzhener; PARFENOV, K.A., dotsent, kandidat tekhnicheskikh nauk; PERTSOVSKIY, L.M., inzhener; POPOV, I.P., inzhener; POGORELEV, B.G., inzhener; RATNER, M.P., inzhener; ROSSIYEVSKIY, G.I., dotsent, kandidat tekhnicheskikh nauk; RYKOV, I.I., kandidat tekhnicheskikh nauk; RYSHKOVSKIY, I.Ya., dotsent, kandidat tekhnicheskikh nauk; RYABKOV, A.Ya., professor [deceased]; TAGER, S.A., kandidat tekhnicheskikh nauk; KHAZEN, M.M., professor, doktor tekhnicheskikh nauk; CHERNYSHEV, M.A., doktor tekhnicheskikh nauk; HDIN, L.Ye., professor, doktor tekhnicheskikh nauk; YURGENEV, B.N., dotsent; AKSENOV, I.Ya., dotsent, kandidat tekhnicheskikh nauk; ARKHANGEL'SKIY, A.S., inzhener; BARTENEV, P.V., professor, doktor tekhnicheskikh nauk; BERNGARD, K.A., kandidat tekhnicheskikh nauk; BOROVOI, N.Ye., dotsent, kandidat tekhnicheskikh nauk; BOGDANOV, I.A., inzhener; BOGDANOV, N.K., kandidat tekhnicheskikh nauk; VIKHICHENKO, H.G., dotsent, kandidat ekonomicheskikh nauk;  
 (Continued on next card)

RENESHEVICH, I.I.----(continued) Card 2.

VASIL'YEV, V.F.; GONCHAROV, N.G., inzhener; DERIBAS, A.T., inzhener; DOBROSEL'SKIY, K.M., dotsent, kandidat tekhnicheskikh nauk; DLUGACH, B.A., kandidat tekhnicheskikh nauk; YEFIMOV, G.P., kandidat tekhnicheskikh nauk; ZEMBLINOV, S.V., professor, doktor tekhnicheskikh nauk; ZABELLO, M.L., kandidat tekhnicheskikh nauk; IL'IN, K.P., kandidat tekhnicheskikh nauk; KARZHENNIKOV, A.D., kandidat tekhnicheskikh nauk; KAPLUN, F.Sh., inzhener; KANSHIN, M.D.; KOCHNEV, P.P., professor, doktor tekhnicheskikh nauk; KOGAN, L.A., kandidat tekhnicheskikh nauk; KUGHURIN, S.F., inzhener; LEVASHOV, A.D., inzhener; MAKSIMOVICH, B.M., dotsent, kandidat tekhnicheskikh nauk; MARPYNOV, M.S., inzhener; MEDNE, O.M., inzhener; NIKITIN, V.D., professor, kandidat tekhnicheskikh nauk; PADNYA, V.A., inzhener; PANTELAYEV, P.I., kandidat tekhnicheskikh nauk; PSTROV, A.P., professor, doktor tekhnicheskikh nauk; POVOROZHENKO, V.V., professor, doktor tekhnicheskikh nauk; PISKAREV, I.I., dotsent, kandidat tekhnicheskikh nauk; SERGEYEV, Ye.S., kandidat tekhnicheskikh nauk; SIMONOV, K.S., kandidat tekhnicheskikh nauk; SIMANOVSKIY, M.A., inzhener; SUYAZOV, I.G., inzhener; TALDAYEV, F.Ya., inzhener; TIKHONOV, K.K., kandidat tekhnicheskikh nauk; USHAKOV, H.Ya., inzhener; USFENSKIY, V.K., inzhener; FEL'DMAN, E.D., kandidat tekhnicheskikh nauk; FERAPONTOV, G.V., inzhener; KHOKHLOV, L.P., inzhener; CHERNOMORDIK, G.I., professor, doktor tekhnicheskikh nauk; SHAMAYEV, M.F., inzhener; SHAFIRKIN, B.I., inzhener; YAKUSHIN, S.I., inzhener; GRANOVSKIY, P.G., redaktor; TISHCHENKO, A.I., redaktor; ISAYEV, I.P., dotsent, kandidat tekhnicheskikh nauk, redaktor; KLIMOV, V.F., dotsent kandidat tekhnicheskikh nauk

(Continued on next card)

BENESHEVICH, I.I.-- (continued) Card 3.

nauk, redaktor; MARKOV, M.V., inzhener, redaktor; KALININ, V.K., inzhener, redaktor; STEPANOV, V.N., professor, redaktor; SIDOROV, H.I., inzhener, redaktor; GERONIMUS, B.Ye., kandidat tekhnicheskikh nauk, redaktor; ROBEL', R.I., otvetstvennyy redaktor

[Technical reference manual for railroad engineers] Tekhnicheskii spravochnik zheleznodorozhnika. Moskva, Gos. transp.zhel-dor. izd-vo. Vol.10. [Electric power supply for railroads] Energosnabzhenie zheleznikh dorog. Otv.red. toma K.G.Markvardt. 1956. 1080 p. Vol.13. [Operation of railroads] Eksploatatsiya zheleznikh dorog. Otv. red. toma R.I.Robel'. 1956. 739 p. (MLRA 10:2)

1. Chlen-korrespondent Akademii nauk SSSR (for Petrov)  
(Electric railroads) (Railroads--Management)

LATONIN, Nikolay Ivanovich; OKHOSHIN, Leonid Ivanovich; BELYAYEV, I.A.,  
inzh., red.; KHITROV, P.A., tekhn.red.

[Handbook for an electrician in railroad power engineering]  
Spravochnik elektromontera energeticheskogo khoziaistva zhe-  
leznykh dorog. Moskva, Gos.transp.shel-dor.izd-vo, 1959.  
570 p. (MIRA 13:2)

(Electric railroads)



LATUNIN, Nikolay Ivanovich; OKHOSHIN, Leonid Ivanovich; ZATUCHNYY,  
I.M., inzh., retsenzent; KALININ, V.K., kand. tekhn.nauk,  
red.; USENKO, L.A., tekhn. red.

[Handbook for the electrician of railroad electric power  
plants] Spravochnik elektromontera energeticheskogo kho-  
ziaistva zheleznnykh dorog. Izd.2., perer. Moskva, Trans-  
zheldorizdat, 1963. 446 p. (MIRA 17:2)

LATUNOV, N.,

~~Training instructors.~~ Kryl.rod. 6 no.4:10 Ap '55. (MIRA 8:9)

1. Zamestitel' nachal'nika Khar'kovskogo aerokluba po politicheskoy chasti.

(Military education)

CA LATUNTSOV, I. P.

Effect of copper on the properties of high-carbon chromium steel. I. P. Latunsov. *Stal* No. 3, 255 8(1948). The  $A_c$  and  $A_r$  points of specimens of high-C steels containing 0.1% of Cu were detd. by dilatometric methods and from the microstructure, and mech. properties after tempering and after quenching and drawing were studied. The results show that Cu lowers the temp. of the crit. points of steel and increases the temp.-hysteresis; it causes the pearlite in tempered steel to assume the form of fine, evenly distributed grains, increases the tensile strength, and decreases the elongation and contraction in area of tempered steels, reduces the impact strength (with more than 0.25% of Cu), improves the structure of quenched steel, and produces an increase in impact strength and a slight reduction of tensile strength under static deformation. High-C Cr-steel is more easily tempered when Cu is present. B. A.

LATUSHKINA, N. M.

U.S.S.R.

✓ Peat ash as a lime fertilizer. I. V. Filipenko and N. M. Latushkina. *Vestnik Akad. Nauk Belarus. S.S.R.* 1954, No. 2, 33-7. — Peat ash, remaining after peat has been burned as fuel, contains 22.6-70.6%  $\text{CaCO}_3$  and 2.6-5.1%  $\text{MgCO}_3$ . The ash is comparable to the dolomite liming fertilizer and to the lime tuff. The total amt. of bases in the ash is 8-11% higher than the sum of  $\text{CaCO}_3$  and  $\text{MgCO}_3$ . Liming of meadows with the pulverized peat ash is as effective as the liming with other liming fertilizers. B. W.

**LATUSHKINA, V.B.**

LEVINA, A.I.; LATUSHKINA, V.B.

Comparative evaluation of the NIOT electroprecipitator (developed by the Moscow Research Institute for the Protection of Labor) and Green's sedimentator. Bor'ba s sil. 1:162-166 '53. (MLRA 7:10)

1. Moskovskiy nauchno-issledovatel'skiy institut okhrany truda VTsSPS.  
(AIR--POLLUTION) (DUST)

LATUSHKINA, V. B.

Latushkina, V. B.

"Problems of labor hygiene in plants producing abrasive materials and abrasive tools (attempts to find a scientific basis for the maximum permissible content in the air of synthetic abrasive dust)." First Moscow Order of Lenin Medical Institute imeni I. M. Sechenov. Moscow, 1956. (Dissertation for the Degree of Candidate in Medical Sciences)

Knizhnaya letopis'  
No. 21, 1956. Moscow.

**LATUSHKINA, V.B., nauchnyy sotrudnik**

**A new device for experimental research on the effect of industrial dust on the organism. Gig. i san. 21 no.8:18-24 Ag '56. (MLRA 9:11)**

**1. Iz Moskovskogo instituta ohrany truda VTSSPS i kafedry gigiyeny truda I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.**

**(INDUSTRIAL HYGIENE**

**exper. research on eff. of indust. dust on organism)**

**(DUST**

**in indust., exper. research on eff.)**

LAPUSHKINA, V. P.

"Hygienic characteristics of the industrial dust of  
artificial abrasives."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists  
and Infectionists, 1959.



LATUSHKINA, V.B. (Moskva)

Changes in the respiratory organs under the action of dust from  
artificial abrasives. Gig. truda i prof. zab. 4 no. 7:49-52 '60.  
(MIRA 13:8)

1. Institut okhrany truda Vsesoyuznogo tsentral'nogo soveta  
profsoyuzov i kafedra gigiyeny truda I Moskovskogo ordena  
Lenina meditsinskogo instituta im. I.M. Sechenova.  
(LUNGS--DUST DISEASES) (ABRASIVES--PHYSIOLOGICAL EFFECT)

LATUSZKIEWICZ, Wieslaw, mgr., inz.

Application of the vibrometer equipment for strain measurements. Ciapl  
masz przepływ no. 37/38:37-41. '62.

62

ACCESSION NR: AT4025428

P/0000/62/000/000/0093/0099

AUTHOR: Latuszkiewicz, Wieslaw (Master engineer)

TITLE: Instrument for measurement of stresses and vibration frequency in rotating elements

SOURCE: Konferencja "Technika Pomiarowa w Ciepłych Maszynach Przepływowych" (Conference on "Measurement technique in thermal flow machines"). Lodz, 1962, 93-99

TOPIC TAGS: stress measurement, turbine stress measurement, vibration frequency, vibration frequency measurement, turbine rotating element, NG-6 vibration measuring instrument

ABSTRACT: The NG-6 apparatus was developed and built by the Heat Engineering Institute's Department of Heat Turbines. This instrument is intended for measuring stresses and vibration frequencies in rotating elements. Measurements are by strain gauge method. The device is characterized by a high degree of simplicity and makes possible the use of one strain gauge in the rotating unit without the necessity of temperature compensation. The impulse from the strain

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ACCESSION NR: AT4025428

gauge is fed through a rotating relay and multipoint change-over switch into an amplifier. The amplifier is powered by a stabilized voltage feed. The amplified pulse is then transmitted to a bifilar suspension oscillograph or cathode oscilloscope. The scaler is connected in parallel to the working strain gauge at the multipoint relay's input. The operation of the apparatus is based on resistance strain gauges working in a circuit of resistance potentiometers. The amplifier has an amplification of  $10^5$ . Its frequency range is 20 to 10,000 kc and range of measured stresses is 50 to 4000 kg/cm<sup>2</sup> at a maximum output current of 100 milliamps. Any cathode type oscilloscope can be used to observe the pulses from the strain gauge. A cathode-type oscillograph or some other automatic recorder can be hooked up to the amplifier's output for recording the responses at the amplifier output. If the vibration frequency of the tested element is to be determined on a bifilar suspension oscillograph or recorder, a signal of given frequency should be emitted and the measured frequency then determined by a comparison of signals. Orig. art. has: 3 figures.

ASSOCIATION: Instytut Techniki Ciepłej, Zakład Turbin Ciepłych, Łódź  
(Heat Engineering Institute, Department of Heat Turbines)

Card 2/3

ACCESSION NR: AT4025428

SUBMITTED: 0000062

DATE ACQ: 09Apr64

ENCL: 00

SUB CODE: MD, IE

NO REF SOV: 000

OTHER: 001

Card 3/3

LATUSZKIEWICZ, Wieslaw, mgr.,inz.; SERWA, Wladyslaw, mgr.,inz.

Transistor installation for the quality control of providing  
blades for TUK 1 turbines. Energetyka przem 10 no.3:117-119 '62.

LATUSZKIEWICZ, Wieslaw, mgr inz.; LISICKI, Andrzej, mgr inz.

Testing of steam turbines for operational adjustment under  
conditions of deteriorated vacuum in the condenser. Energetyka  
przem 10 no.12:439-444 D '62.

CHRUST, Witold, mgr inz.; LATUSZKIEWICZ, Wieslaw, mgr inz.; SERWA,  
Wladyslaw, mgr inz.

Measuring the relative displacement of elements of gear-type  
coupling of a steam turbine under variable operational con-  
ditions. Gosp paliw 11 no.12:477-479 D'63.

1. Zaklad Turbin Ciepnych, Instytut Techniki Ciepnej,  
Lodz.



LATUSZKIEWICZ, Wieslaw, mgr inż.

Equipment for research on stresses and vibrations in rotating elements of turbomachines. Przegl mech 22 no. 16: 489-492  
25 Ag '63.

1. Pracownik naukowo-badawczy w Instytucie Techniki Ciepłej,  
Lodz.

LATUSZKIEWICZ, Wieslaw, mgr inz.

Measurements of dynamic stresses and vibration frequency of  
rotating elements. Inst techn ciepl prace 9 no. 20:35-52 '64.

LATUSZKIEWICZ, Wiesław, mgr inż.; LISICKI, Andrzej, mgr inż.

Testing the 7 MW stal radial flow turbine in order to adjust it to operation under conditions of a worsened condenser vacuum.  
Gosp paliw 12 no.2:Suppl.: Biul inst techn ciepl 12 no.2:  
73-76 F '64.

1. Zakład Turbin Ciepłych, Instytut Techniki Ciepłej, Łódź.

LATUSZKIEWICZ, Wieslaw, mgr inz.; LISICKI, Andrzej, mgr inz.

Tests of the 7 MW steel radial-flow turbine in order to adjust it to work under conditions of worsened vacuum in the condenser.  
Biul inst techn ciepl 12 no.2:73-76 F '64.

1. Department of Thermal Turbines of the Institute of Heat Engineering, Lodz.

LATVIAN, A.S.

The possibility of production of maleic anhydride and maleic dialdehyde from furfural.

Report to be submitted for the 12th Conference on high molecular weight compounds devoted to monomers, Baku, 3-7- April 62

LATVIKOVA, P. S.

U USSR/Physics - Oscillatory spectrum

FD-989

Card 1/1 Pub. 146 - 13/20

Author : Latvikova, P. S.

Title : Oscillatory structure in the spectra of zinc oxide

Periodical : Zhur. eksp. i teor. fiz., 27, No 5 (11), 636-645, Nov 1954

Abstract : In the absorption spectra and radiation spectra of zinc oxide one observes a system of weak maxima. The author describes the electron-vibration formula for two values of the energy of electron perturbation. The electron transition is connected with the perturbation of the activator. In this case the oscillatory states of the lattice, which is connected energy-wise with the activator, appear in the spectra of absorption and radiation. Eleven references, 2 Western and 9 USSR (e.g. G. A. Konovalov, Dissertation, Tomsk State University, 1952. L. A. Suvolorova, Diploma Work, Tomsk State University, 1952. N. L. Gasting, Sib. FTI, Otchet za 1947 [Siberian Physico-technical Institute, Account for 1947].)

Institution : Siberian Physicotechnical Institute, Tomsk State University

Submitted : November 18, 1953

EYDLIN, Isaak Yakovlevich. Prinimali uchastiye VANCHAKOV, V.M., inzh.  
[deceased]; LATVINOV, M.D., inzh.; KOZULIN, N.A., doktor  
tekhn. nauk, prof., ofitsial'nyy retsenzent; GOLOVKO, Ye.M.,  
inzh., ofitsial'nyy retsenzent; KLOPOV, V.M., inzh., ofi-  
tsial'nyy retsenzent; BRODOTSKIY, A.I., kand. tekhn. nauk,  
dots., red.; KHIVRICH, Ye.D., red. izd-va; GRECHISHCHEVA, V.I.,  
tekhn. red.

[Papermaking and finishing machines] Bumagodelatel'nye i ot-  
delochnye mashiny. Izd.2., perer. i dop. Moskva, Goslesbum-  
izdat, 1962. 686 p. (MIRA 16:5)

(Papermaking machinery)

LATVIYETIS, Ya.[Latvietis; J.]

Effect of rhythmic changes in feeding on the development of young  
cattle of the Latvian Brown breed. Vestis Latv ak no.7:103-109 '61.

(Latvia--Cattle breeding)



LATVYS, V.; SLIZYS, V.

Formation and determination of compounds in the system

$\text{CaSO}_4\text{-SiO}_2\text{-Al}_2\text{O}_3\text{-Fe}_2\text{O}_3\text{-C}$ . Trudy AN Lit. SSR. Ser. B no. 1:  
153-159 1962 (MIRA 17:8)

1. Institut khimii i khimicheskoy tekhnologii AN Litovskoy  
SSR.

RAZUVAYEV, G.A.; LATYAYEVA, V.N.; VYSHINSKAYA, L.I.

Oxidation of bis-cyclopentadienylphenyltitanium by hydrogen peroxide.  
Zhur.ob.khim. 32 no.4:1354-1355 Ap '62. (MIRA 15:4)  
(Titanium compounds) (Oxidation)

LATYAYEVA, V.N.

USSR/Chemistry - Photoreaction

Card 1/1 Pub. 151 - 14/38

Authors : Razuvaev, G. A.; Ol'dekop Yu. A.; and Latyaeva, V. N.

Title : Photoreaction of organometallic mercury compounds in solutions. Part 14.-  
Photoreaction of beta-mercuribispropionic acid and its dimethyl ether

Periodical : Zhur. ob. khim. 24/2, 260-262, Feb 1954

Abstract : The photoreaction (exposure to ultraviolet light) of beta-mercuribispropionic acid in solutions of methanol and monoethyl ether of ethylene glycol was investigated. The photoreaction was concluded with the separation of the mercury and formation of propionic and adipic acids. The separation of the hydrogen from the solvent by the carboxyethyl radicals was found to be instrumental in the formation of the propionic acid and the formation of adipic acid is due to the dimerization reaction of above mentioned radicals. Aldehydes were discovered in both cases. Four references: 3-USSR and 1-German (1907-1952).

Institution : State University, Gorkiy

Submitted : June 19, 1953

RAZUVAYEV, G.A.; OL'DEKOP, Yu.A.; LATYAYEVA, V.N.

Reactions of asymmetric acyl peroxides with mercury. Zhur.ob.  
khim. 26 no.4:1110-1113 Ap '56. (MLRA 9:8)  
(Peroxides) (Mercury organic compounds)

~~LATYAYEVA, V. N.~~

~~LATYAYEVA, V. N.~~

Reactions of acetyl benzoyl peroxide with alcohols and acetic acid. G. A. Razuvaev and V. N. Latyayeva (State Univ., Leningrad). Zhur. Obshchei Khim. 25, 1888-91 (1955).

Reactions of  $Bz_2O_2Ac$  with  $MeOH$ ,  $EtOH$ ,  $iso-PrOH$ , and  $BzOH$  were examined. These proceed at reflux with dehydrogenation of the alcs, forming mixts. of  $AcOH$  and  $BzOH$  on one hand, and of  $BzOH$ ,  $CH_4$ , and  $CO_2$  on the other hand. The rate of reaction declines in the order:  $iso-Pr$ ,  $Et$ ,  $Me$ ,  $tert-Am$ . Diphenylpicrylhydrazide inhibits the reaction which evolves  $CH_4$  and  $CO_2$ .  $Bz_2O_2Ac$  with  $AcOH$  at  $00^\circ$  yields  $CH_4$ ,  $CO_2$ ,  $BzOMe$ ,  $(C_6H_5CO_2H)_2$ ,  $C_6H_6$ ,  $Ph_2$ , and  $\alpha$ -phthalic acid, along with probably the

isomers of homophthalic acids. Alkali with  $Bz_2O_2Ac$  in  $EtOH$  forms  $Bz_2O_2$ ,  $AcOH$ , and  $AcO_2R$ . Kinetic curves of the reaction with alcs. and  $Bz_2O_2Ac$  are shown in the  $40-60^\circ$  range. G. M. Kosolapoff

Gor'kovskiy gosudarstvennyy universitet

LATYAYEVA, V.N., Cand. ~~Ph.D.~~<sup>Sci.</sup> Sci—(Disc) "Reaction of ~~per~~<sup>a</sup>acyl peroxides." Gor'kiy, 1958. 10 pp (Min of Higher Education USSR.  
Gor'kiy State U to V.I. Lel'chevskiy), 110 cards (U, 31-52, 22)

-13 -

AUTHORS: Razuvayev, G. A., Latyayeva, V. N. SOV/79-28-8-48/66

TITLE: Reactions of the Acyl Peroxides With Metals (Reaktsii atsil'nykh perekisey s metallami)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 8, pp. 2233 - 2239 (USSR)

ABSTRACT: The authors were interested in investigating more closely the influence of different metals on the decomposition of symmetrical and unsymmetrical acyl peroxides in solutions. Special attention was paid to the reactions of the radioactive hydrogen atom which gives up its electron pair in alcohols. For this purpose decomposition reactions of benzoyl peroxide were carried out in methyl, ethyl, and isopropyl alcohols, and in chloroform,  $\text{CCl}_4$  and  $\text{C}_6\text{H}_6$  in the presence of metallic Na, Zn, Cu, Fe, Ni,  $\text{Ag}^4$  and Pt and at room temperature. A few reactions with phenacyl, phenacylbenzoyl, and p-nitrobenzoyl peroxide were also carried out. The experiments with benzoyl peroxide showed that in benzene and alcohol solutions and in the presence of Na (2% amalgam) and Zn, salts of benzoic acid form quantitatively, but no salts form from the mercury

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## Reactions of the Acyl Peroxides With Metals

SOV/79-28-8-48/66

in the sodium amalgam. In the presence of Ni and Fe in alcohol only some of the benzoyl radicals become anions. Free benzoic acid and aldehydes were found in the reaction products in addition to the salts. The mechanism of the described reaction are probably thus: in one case the peroxide accepts two electrons from the metal and forms benzoate anions:  $(C_6H_5CO_2)_2 + Zn \rightarrow 2C_6H_5COO^- + Zn^{2+}$ . In the other case the electron transfer occurs with the formation of a benzoate anion and a benzoyl-oxy radical (see the second reaction diagram). The latter reacts with the solvent, the alcohol. In the case of acetylbenzoyl peroxide similar results were obtained, i.e., acetate and benzoate in the presence of Na, Hg, and Zn reacted in benzene in the same manner as in the alcohol solution; in the presence of Ni, Cu, and Ag acetates of the metals and free benzoic acid were found. In chloro-organic solvents chlorides of the metals were observed to form initially. In the presence of platinum a hydrogenation of the peroxide with the alcohol hydrogen occurred. The table indicates the reactions of the acyl peroxides with the metals. There are 1 figure, 1 table, and 11 refer-

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Reactions of the Acyl Peroxides With Metals

SOV/79-28-8-48/66

ences, 7 of which are Soviet.

ASSOCIATION: Gor'kovskiy gosudarstvennyy universitet (Gor'kiy State University)

SUBMITTED: July 8, 1957

Card 3/3

LATYEYEVA, V.N.

Reactions of acyl peroxides. Sbor. nauch. rab. Inst. fiz.-org.  
khim. AN BSSR no.8:58-62 '60. (MIRA 14:3)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom  
gosudarstvennom universitete im. N.I. Lobachevskogo.  
(Peroxides)

RAZUVAYEV, Grigoriy Alekseyevich, laureat Leninskoy premii; LATYAYEVA,  
Viktoriya Nikolayevna, kand.khim.nauk; VAYNBOYM, I.B., red.;  
ATROSHCHENKO, L.Ye., tekhn.red.

[Free radicals in chemistry] Svobodnye radikaly v khimii.  
Moskva, Izd-vo "Znanie," 1960. 39 p. (Vsesoiuznoe obshchestvo  
po rasprostraneniю politicheskikh i nauchnykh znaniy. Ser.9,  
Fizika i khimiya, no.23). (MIRA 14:1)

1. Chlen-korrespondent AN SSSR (for Razuveyev).  
(Radicals (Chemistry))

83901

S/020/60/134/003/014/020

B016/B054

5.3700

AUTHORS: Razuvayev, G. A., Corresponding Member AS USSR,  
Latyayeva, V. N., and Vyshinskaya, L. I.

TITLE: Some Reactions of Bis-cyclopentadienyl-diphenyl Titanium //

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 3,  
pp. 612-614

TEXT: The authors compare some chemical properties of  $(C_5H_5)_2TiAr_2$  with those of other organometallic compounds ( $Ar$  = aryl radical). To compare reactivity, they applied the exchange reaction radical - halogen for  $(C_5H_5)_2TiCl_2$  and  $(C_6H_5)_2Hg$  on the one hand, and for  $(C_5H_5)_2Ti(C_6H_5)_2$  and  $HgCl_2$  on the other. From a boiling solution of the components in benzene or methylene chloride, they isolated a) about 20% of the expected phenyl mercury chloride from benzene, and b) nearly the theoretical yield from methylene chloride. The reaction with sublimate was carried out in  $CCl_4$  or in benzene at  $80^\circ C$ . The main products obtained were: bis-

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83901

Some Reactions of Bis-cyclopentadienyl-diphenyl  
Titanium

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B016/B054

cyclopentadienyl-titanium dichloride and phenyl mercury chloride (1 : 2).  
The authors conclude from this ratio that in  $\text{CCl}_4$  mainly (at about 70%)  
an exchange reaction takes place between bis-cyclopentadienyl-diphenyl  
titanium and the sublimate according to equation (2). In benzene solutions,  
the bis-cyclopentadienyl-titanium dichloride yield decreased to 24% while  
up to 90% of phenyl mercury chloride was formed. Further, chloro benzene,  
diphenyl, and calomel were isolated from the  $\text{CCl}_4$  medium. Phenol also  
formed in the presence of atmospheric oxygen. The formation of these  
by-products is explained by a parallel reaction of the initial organo-  
titanium compound with the solvent. For this reason, the authors carried  
out the dissociation reactions of  $(\text{C}_5\text{H}_5)_2\text{Ti}(\text{C}_6\text{H}_5)_2$  in different solvents.

With the exclusion of air, the original yellow color of the solution  
changed to dark green due to heating. The latter color corresponds to the  
paramagnetic form of bis-cyclopentadiene titanium (Ref. 4). The formation  
of chloro benzene and small amounts of diphenyl in a  $\text{CCl}_4$  medium is known  
(Ref. 5). The authors assumed an original homolysis of the  $\text{Ti}-\text{C}_6\text{H}_5$  bond  
and the formation of a free phenyl radical; to check this assumption  
they allowed  $(\text{C}_5\text{H}_5)_2\text{Ti}(\text{C}_6\text{H}_5)_2$  to react with methyl- and isopropyl alcohol,

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83901

Some Reactions of Bis-cyclopentadienyl-diphenyl  
Titanium

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B016/B054

as well as with chloroform. On the basis of the results, the authors assume the following reaction mechanism: the initial titanium compound decomposes when heated or subjected to ultraviolet radiation, along with the separation of the phenyl radical and the formation of paramagnetic, dark-green bis-cyclopentadiene titanium. The behavior of the resulting phenyl radicals depends on the type of solvent: in benzene, they yield diphenyl, whereas in alcohol solutions or in chloroform they attract the hydrogen to form benzene. All reactions mentioned remind one very much of the thermo- and photoreactions of diphenyl mercury with alcohols, with  $\text{CCl}_4$ , and with chloroform, which proceed according to a free-radical mechanism. There are 5 references: 1 Soviet and 1 US.

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii Gor'kovskogo gosudarstvennogo universiteta im. N.I. Lobachevskogo  
(Scientific Research Institute of Chemistry of the Gor'kiy State University imeni N. I. Lobachevskiy)

SUBMITTED: June 16, 1960

Card 3/3

S/030/61/000/004/013/015  
B105/B206

AUTHORS: Razuvayev, G. A., Corresponding Member AS USSR, Latyayeva,  
V. N., Candidate of Chemical Sciences, Brilkina, T. G.,  
~~Candidate of Chemical Sciences~~

TITLE: Homolytic reactions in the liquid phase

PERIODICAL: Vestnik Akademii nauk SSSR, no. 4, 1961, 124-127

TEXT: The first simpozium po gomoliticheskim reaktsiam v zhidkoy faze (Symposium on Homolytic Reactions in the Liquid Phase) held in Gor'kiy and Dzerzhinsk from December 7-10, 1960, is described. The Symposium which was attended by about 500 chemists, was convened by the Nauchnyy sovet po teorii khimicheskogo stroyeniya, kinetike i reaktsionnoy sposobnosti Otdeleniya khimicheskikh nauk Akademii nauk SSSR (Scientific Council for the Theory of Chemical Structure, Kinetics and Reactivity of the Department of Chemical Sciences AS USSR), the Gor'kovskiy nauchno-issledovatel'skiy institut khimii (Gor'kiy Scientific Research Institute of Chemistry) and the oblastnoye otdeleniye Vsesoyuznogo khimicheskogo obshchestva im. D. I. Mendeleeva (Rayon Department of the All-Union Chemical Society imeni D. I. Men-

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Homolytic reactions ...

S/030/61/000/004/013/015  
B105/B206

deleyev). The following reports are mentioned: By the method of electronic paramagnetic resonance, V. V. Voyevodskiy clarified the structure of benzene chromate cations as well as the aromatic ionic radicals, and established the formation of hydrogen atoms during the irradiation of the system  $\text{Fe}^{2+} + \text{H}_2\text{SO}_4 + \text{H}_2\text{O}$  at 77°K by means of ultraviolet light; M. E. Neyman, A. L. Buchachenko reported on the formation of stable radicals which can serve as basis for the determination of active, short-lived radicals; A. N. Terenin, B. L. Kurbatov, R. F. Vasil'yev, A. A. Vichutinskiy, O. N. Karpukhin, L. M. Postnikov, and V. Ya. Shlyapintokh reported on the method of chemiluminescence; K. S. Bagdasar'yan, R. I. Milyutinskaya, E. A. Trosman, and V. A. Borovkova investigated the reactions of the phenyl- and nitrophenyl radicals with aromatic compounds by the kinetic method; V. F. Tsepalov found an expression for the rate of consumption of an arbitrary component as function of the concentration of reacting substances; N. M. Emanuel' discovered the dependence of the oxidizing of liquefied hydrocarbon on the concentration of the solvent; N. M. Emanuel', E. K. Mayzus, and I. P. Skibida reported on the production of alcohols and ketones according to the chain- and molecular method of the oxidation of n-decane; B. V. Yerofeyev reported on complementing the previous theory of primary initiating by a secondary initiating; K. I. Ivanov and Ye. D.

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Homolytic reactions ...

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Vilyanskaya showed that aniline added to an oil already in a state of oxidation is converted into a product behaving similar to a peroxide radical which accelerates the reaction; B. A. Redoshkin and V. A. Shushunov showed the dual effect of metal salts of variable valency; A. I. Buchachenko, M. P. Neyman, and K. Ya. Kaganskaya determined the average lifetime of peroxide radicals of trimethyl heptane (3.5 sec); I. V. Berezin, K. Vatsek, Go Chu, and N. F. Kazanskaya classified a number of free radicals according to their kinetic indices; Ye. N. Gur'yanova, I. G. Chernomorskaya, and M. S. Fel'dshteyn discovered the direct dependence between exchangeability of the compounds S-S, S-N, S-C and their vulcanizing activity; G. A. Razuvayev, G. G. Petukhov, Ye. V. Mitrofanova, and V. N. Iatvavava showed that the use of isotope methods permits the discovery of new reactions during the oxidation of organometallic compounds, which cannot be determined by other methods; V. A. Shushunov, Yu. A. Aleksandrov, and T. G. Brilkina submitted a scheme of the oxidation process of the organometallic compounds investigated; N. S. Vyazankin, G. A. Razuvayev, Yu. I. Dergunov, and O. A. Shchepatkova reported on the homolytic cleavage of elementary compounds; Yu. A. Ol'dekop and N. M. Mayer reported on the mechanism of the homolytic synthesis of organometallic compounds; N. P. Khyrak and V. A. Pal'm reported on the homo-

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Homolytic reactions ...

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B105/B206

lytic character of the formation of organomagnesium compounds: A. V. Savitskiy and Ya. K. Syrkin reported on the spectrophotometric investigations which were utilized for determining the thermodynamic indices of the oxidation reactions of ferrocene and rutheniumcene by means of iodine; G. I. Nikishin and V. D. Vorob'yev reported on the linkage of the alcohols  $C_5-C_{10}$  to  $\alpha$ -olefins of the composition  $C_6-C_{13}$ ; G. I. Nikishin, Yu. N. Ogibin, and A. D. Petrov reported on esters of dicarboxylic acids which are linked to  $\gamma$ -olefins under formation of esters of  $\alpha$ -alkyl carboxylic acids; G. A. Razuvayev and L. S. Boguslavskaya reported on the production of glycol esters; M. G. Gonikberg and V. M. Zhulin reported on the production of an unstable polymer at a pressure of  $5000 \text{ kg/cm}^2$ , which is depolymerized at customary pressure; A. P. Meshcheryakov and I. Ye. Dolgiy reported on the production of substituted cyclopropane derivatives by addition of methylene radical and its derivatives on alkene; A. N. Nesmeyanov, R. Kh. Freydlina, V. N. Kost. M. Ya. Khorlina, T. T. Sidorova, R. G. Petrova, and A. B. Terent'yev arranged the investigated radicals according to their relative stability; M. F. Shostakovskiy, Ye. N. Prilezhayeva, and L. V. Tsymbal reported on heterolytic reactions of the additions which are strictly subordinated to the rule of transaddition; G. M. Strongin reported on the conforma-

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Homolytic reactions ...

S/030/61/000/004/013/015  
B105/B206

tion of products of the homolytic addition of chlorine on benzene. The delegates of the Symposium expressed the wish to discuss regularly chemical problems connected with the homolytic reaction in the liquid phase.

Card 5/5

S/079/61/031/001/023/025  
B001/B066

AUTHORS: Razuvayev, G. A., Latyayeva, V. N., and Petukhov, G. G.

TITLE: Decomposition of Acyl Peroxides in Acid Medium

PERIODICAL: Zhurnal obshchey khimii, 1961, Vol. 31, No. 1, pp. 268 - 274

TEXT: Refs. 1 and 2 indicate the possibility of a regenerative exchange in carboxylic acids  $\text{RCOO}^\cdot + \text{R}'\text{COOH} \longrightarrow \text{RCOOH} + \text{R}'\text{COO}^\cdot$  (1), but so far this could not be confirmed experimentally. On the basis of Refs. 1 - 5, the authors tried once more to establish the so-called "relay-transfer" of the acyloxy radicals (1) in carboxylic acids. For this purpose, the reaction of benzoyloxy- and m-nitro-benzoyloxy radicals which are more stable than the acetyloxy radicals was carried out in acetic and benzoic acid  $\text{C}^{14}$ -labeled in the carboxyl. The separation of labeled  $\text{C}^{14}\text{O}_2$  may indicate the occurrence of such an exchange, provided that the initial acids and the resultant products are stable to  $\text{CO}_2$  separation during the course of reaction. A spontaneous decarboxylation of acetic and benzoic acid at  $100^\circ\text{C}$  is im-

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Decomposition of Acyl Peroxides in Acid  
Medium

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B001/B066

possible. Apart from the papers of Refs. 6 - 8, no papers have been published so far on the reaction products of benzoyl and acetyl-benzoyl peroxide in benzoic acid, and of m-nitro-benzoyl peroxide in acetic acid. The authors therefore first determined the principal products of these reactions. They studied the decomposition of benzoyl-, acetyl-benzoyl- and m-nitro-benzoyl peroxides in acetic and benzoic acid labeled with  $C^{14}$  in the carboxyl. The separating carbon dioxide gas was found to contain 2 - 25 % of radioactive  $C^{14}O_2$ . Decomposition of benzoyl- and m-nitro-benzoyl peroxide in deuterated acetic acid ( $CH_3COOD$ ) disclosed that the R-radical of the peroxide splits off 1 - 3 % deuterium from the carboxyl group of the acid ( $R = C_6H_5, C_6H_4NO_2$ ). The separation of the labeled  $C^{14}O_2$  is explained by the "relay-transfer" of the acyloxy radicals in carboxylic acid medium. The only possible source of the  $C^{14}O_2$  formation is thus the decarboxylation of the  $RC^{14}OO\cdot$  radicals of the labeled solvent. Contrary to the remaining peroxides, acetyl benzoyl peroxide gives a considerable quantity of methyl benzoate on decomposition into acids,

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Decomposition of Acyl Peroxides in Acid  
Medium

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B001/B066

especially in the case of benzoic acid (70 %), which may be explained by the reaction  $C_6H_5COOOCOCH_3 \longrightarrow C_6H_5COOCH_3 + CO_2$  (2). Table 2 summarizes the experimental results on the decomposition of benzoyl-m-nitro-benzoyl peroxide dissolved in  $CH_3COOD$ ; they show that in the case of the phenyl radical, the deuterium separation is 3 %, and in the case of the nitro-phenyl radical 1.2 %. With m-nitro-benzoyl peroxide the ratio of  $C_6H_4DNO_2 : C^{14}O_2$  is only 1 %. S. F. Zhil'tsov is thanked for carrying out the radiometric determinations. There are 2 tables and 11 references: 5 Soviet, 4 US, and 2 British.

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete (Scientific Research Institute of Chemistry at the Gor'kiy State University)

SUBMITTED: January 29, 1960

Card 3/3

RAZUVAYEV, G.A.; LATYAYEVA, V.N., kand.khim.nauk; BRILKINA, T.G., kand.khim.  
nauk.

Homolytic reactions in the liquid phase. Vest. AN SSSR 31  
no.4:124-127 Ap '61. (MIRA 14:4)

1. Chlen-korrespondent AN SSSR (for Razuvayev).  
(Chemical reactions)

LATYAYEVA, V.N.

5-3700

25319

S/020/61/138/005/019/025  
B103/B220

AUTHORS: Razuvayev, G. A., Corresponding Member AS USSR, Latyaeva, V.N.,  
and Vyshinskaya, L. I.

TITLE: Reaction of benzoyl peroxide with titanocene derivatives

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 138, no. 5, 1961, 1126-1129

TEXT: The authors studied the interaction of biscyclopentadienyl titanium ( $C_2H_5$ )<sub>2</sub>Ti with benzoyl peroxide, since the acyl peroxides are donors of acyloxy radicals and easily break the O—O bond. According to a previous paper by the authors (Ref. 1: DAN, 134, 612 (1960)), ( $C_2H_5$ )<sub>2</sub>Ti forms on thermal decomposition of biscyclopentadienyl-phenyl titanium in alcohol or benzene solution, is very reactive and sensitive to atmospheric oxygen. Benzoyl peroxide is known to destroy sandwich compounds completely (Posakker, Ref. 2: RZhKhim, 1959, No. 22, 78502). In the present case, the titanocene group was not decomposed in benzene or isopropyl alcohol in the cold by the action of benzoyl peroxide. The color of the solution changed instantaneously from dark green to dazzling yellow. CO<sub>2</sub> was not

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Reaction of benzoyl peroxide with...

25319

S/020/61/138/005/019/025  
B103/B220

liberated in the reaction. The yellow crystalline product obtained in a dry nitrogen atmosphere was the expected biscyclopentadienyl titanium dibenzoate:  $(C_5H_5)_2Ti(OCOC_6H_5)_2$ . Since it had not yet been described, the authors also synthesized it from titanocene dichloride and silver benzoate. They checked its identity by ultimate analysis (for which T. V. Guseva is thanked), by determination of the molecular weight, the melting point, and the content of benzoate groups.  $(C_5H_5)_2Ti(OCOC_6H_5)_2$  can be hydrolyzed very easily, whereby the molecule of the titanocene salt decomposes and cyclopentadiene, the salt of benzoic acid, and titanous acid are formed. On alcoholysis in absolute isopropyl alcohol, cyclopentadiene, acetone, and benzoic acid were found among the reaction products. By the action of moist air, the titanocene dibenzoate molecule loses two moles of cyclopentadiene and can be converted to dibenzoxo titanium oxide  $O=Ti(OCOC_6H_5)_2$ . This product is infusible. An analogous representative of compounds of the type  $(C_5H_5)_2Ti(OCOR)_2$  was obtained by the reaction of titanocene dichloride with silver acetate:  $(C_5H_5)_2Ti(OCOCH_3)_2$ . It is yellow, melts at 127-130°C, and corresponds to biscyclopentadienyl

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Reaction of benzoyl peroxide with... <sup>25319</sup>

S/020/61/138/005/019/025  
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titanium diacetate. On alcoholysis of the latter in absolute isopropyl alcohol, acetate groups were split off and cyclopentadiene was formed to some extent. A yellow substance was precipitated, which is insoluble in organic solvents and has a structure unknown so far. Dissolved acetone was found in the isopropyl alcohol. The yellow substance mentioned was hydrolyzed completely in dilute alkali, whereby cyclopentadiene as well as acetic and titanous acids were formed. The formation of dibenzoate indicates that, unlike ferrocene, the structure of titanocene remains unchanged in this case. The authors studied the action of benzoyl peroxide on the cyclopentadienyl compounds of tetravalent titanium, i.e., on diphenyl biscyclopentadienyl titanium. Even at room temperature, the phenyl radicals in isopropyl alcohol are replaced by the acyloxy groups of the peroxide:  $(C_5H_5)_2Ti(C_6H_5)_2 + (C_6H_5COO)_2 + CH_3CH(OH)CH_3 \rightarrow (C_5H_5)_2Ti(OCOC_6H_5)_2 + 2C_6H_6 + CH_3COCH_3$ . Thereby, biscyclopentadienyl titanium dibenzoate is formed. The phenyl radicals are converted into benzene by dehydration of the alcohol to acetone. The following absorption bands (in  $cm^{-1}$ ) were found by comparing the infrared spectra of the final and the initial compounds:  $(C_5H_5)_2Ti(C_6H_5)_2$  448, 459, 606, 690, 720, 770, 822, 886, 930,

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Reaction of benzoyl peroxide with...<sup>25319</sup>

S/020/61/138/005/019/025  
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1024, 1076, 1286;  $(C_5H_5)_2TiCl_2$ : 769, 814, 828, 872, 880, 930, 1018;  
 $(C_5H_5)_2Ti(OCOC_6H_5)_2$  404, 520, 600, 624, 822, 865, 1024;  $(C_5H_5)_2Ti(OCOC_6H_5)_2$   
720, 830, 1024, 1068, 1132. The bands 822-830 and 1018-1024  $cm^{-1}$  are  
to be found in the spectra. They are interpreted by the authors as  
vibrations of the cyclopentadienyl ring. The band 865  $cm^{-1}$  is absent in  
the spectra of the initial compounds, and is interpreted as belonging to  
the vibrations of the Ti-O bond. There are 1 table and 3 references:  
2 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-lan-  
guage publication reads as follows: J. D. Varma, R. C. Mehrotra  
(Ref. 3: J. Inorg. Nucl. Chem. 8, 64 (1959)).

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom  
gosudarstvennom universitete im. N. I. Lobachevskogo  
(Scientific Research Institute of Chemistry at Gor'kiy  
State University imeni N. I. Lobachevskiy)

SUBMITTED: February 20, 1961

Card 4/4

RAZUVAYEV, G.A.; LATYAYEVA, V.N.; VYSHINSKAYA, L.I.

Free radical reactions of bis-cyclopentadienyldiphenyltitanium.

Zhur.ob.khim. 31 no.8.2667-2674 Ag '61. (MIRA 14:8)

(Titanium organic compounds)

(Radicals (Chemistry))

LATYAYEVA, V. N.; MALYSHEVA, A. V.; RAZUVAYEV, G. A.

Preparation of methylmercury salts. Zhur. VKHO 7 no.5:594 '62.  
(MIRA 15:10)

1. Gor'kovskiy gosudarstvennyy universitet.

(Mercury compounds)

L 10285-63

EWP(j)/EPP(c)/EWT(m)/EDS ASD Fe-L/Pr-L RM/WW/MAY

ACCESSION NR: AP3000751

S/0020/63/150/003/0566/0569

AUTHOR: Razuvayev, G. A. (Corr. member AN SSSR); Latyayeva, V. N.;  
Malyshcheva, A. V.; Kilyakova, G. A.

66

TITLE: New phenyl derivatives of Ti 7

SOURCE: AN SSSR. Doklady, v. 150, no. 3, 1963, 566-569

TOPIC TAGS: phenyl derivatives of Ti,  $\text{PhTiCl}_3$  sub 3 and  $\text{Ph}_2\text{Ti}$  formation, decomposition of  $\text{PhTiCl}_3$  sub 3, decomposition of  $\text{Ph}_4\text{Ti}$ , thermal stability of  $\text{Ph}_2\text{Ti}$

ABSTRACT: Phenyl derivatives of Ti have been synthesized for the first time by maintaining the reaction shown in formula (1) of Enclosure at approximately 90C. Of the Ti derivatives, only  $\text{Ph}_2\text{Ti}$ , the first covalent metalloorganic compound of divalent Ti, was isolated in pure form. The formation of  $\text{PhTiCl}_3$  sub 3 (I) was confirmed by the following reactions: 1) the reaction shown in formula (2) of Enclosure; 2) decomposition of I to form diphenyl and  $\text{TiCl}_3$  sub 3; and 3) decomposition of I in C sub 14-tagged benzene to diphenyl

Cord 1/32

L 10285-63

ACCESSION NR: AP3000751

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containing no C sup 14. The formation of diphenyl prompted the study of reactions of TiCl sub 4 with varying amounts of Ph sub 2 Hg or PhLi in tetrahydrofuran. Better results were obtained with PhLi. An intense black discoloration was observed at room temperature when the TiCl sub 4/PhLi ratio was 4/1. At -70C thermally unstable orange-red crystals were formed. The assumption that the latter were Ph sub 4 Ti (II) which could not be isolated was confirmed by reaction with HgCl sub 2 as shown in formula (3) of Enclosure. In the formation of II, a black substance was isolated which, after recrystallization in saturated hydrocarbons (n-nonane), formed a black crystalline compound which ignites spontaneously in air. The compound proved to be diphenyl titanium (III) formed by the decomposition of II as shown in formula (4) of Enclosure. Compound III is stable but extremely O sub 2-sensitive and decomposes slowly in a sealed ampoule at 200C into diphenyl and metallic titanium mirror. The composition of III was confirmed by chemical analysis and by its reactions. Whether the structure of III is monomeric or polymeric was not determined. Orig. art. has: 6 formulas.

ASSOCIATION: none

SUBMITTED: 16Feb63

DATE ACQ: 21Jun63

ENCL: 01

SUB CODE: 00

NO REF SOV: 001

OTHER: 005

Card 2/3

L 24832-65 EWT(m)/EPF(c)/EPR/ENP(j) Pc-Li/Pr-Li/Ps-Li RM

ACCESSION NR: AP4049488

S/0020/64/159/002/0383/0384

39  
38  
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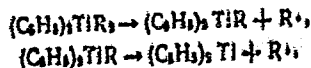
AUTHOR: Razuvayev, G.A., (Corresponding member AN SSSR), Latyayeva, V.N.,  
Vy\*shinskaya, L.I.

TITLE: Decomposition of biscyclopentadienyl derivatives of titanium in solvents

SOURCE: AN SSSR. Doklady\*, v. 159, no. 2, 1984, 383-384

TOPIC TAGS: biscyclopentadienyl titanium, organotitanium compound, electron paramagnetic resonance, alkyltitanium solvation

ABSTRACT: The purpose of the work was to determine if there is any difference in the thermal decomposition of biscyclopentadienyldiethyl titanium in n-hexane and tetrahydrofuran. Studies of EPR spectra indicated that decomposition takes place by successive rupture of radicals with formation of intermediate compounds of trivalent Ti, which further decompose to compounds of divalent Ti that give no EPR signal. Both solvents behave identically. Thus, it can be assumed that the process takes place in accordance with



(1)

(2)

Cord 1/2



L 24832-65

ACCESSION NR: AP494988

The nature of the radical does not affect the general nature of the exchange and decomposition reactions of  $(C_5H_5)_2TiR_2$ . Orig. art. has: 1 figure and 6 chemical equations.

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete im. N.I. Lobachevskogo (Scientific Research Institute of Chemistry, Gor'kiy State University)

SUBMITTED: 02Jul54

ENCL: 00

SUB CODE: OC

NO REF SOV: 002

OTHER: 002

Card 2/2

ACCESSION NR: AP4040951

S/0020/64/156/005/1121/1123

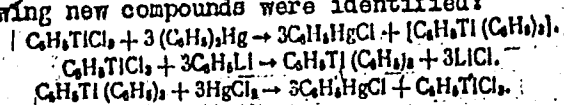
(Corresponding member AN SSSR)  
AUTHOR: Razuvayev, G. A.; Latyayeva, V. N.; Vy\*shinskaya, L. I.; Vy\*shinskiy, N. N.

TITLE: New monocyclopentadienyl derivatives of titanium

SOURCE: AN SSSR. Doklady\*, v. 156, no. 5, 1964, 1121-1123

TOPIC TAGS: titanium, titanium derivative, monocyclopentadienyl derivative, Ti monocyclopentadienyl derivative, phenol, cyclopentadienyl dimethyltitane, diphenyl mercury, phenyl mercury chloride, organotitanium compound

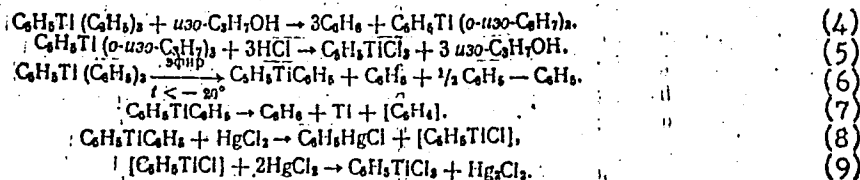
ABSTRACT: The authors analyzed reactions wherein the Cl atoms in monocyclopentadienyl titanium trichloride were replaced with phenyl groups. G. A. Razuvayev et al (DAN, 150 (1963) 566) Previously showed that, during the reaction of titanium tetrachloride, all four Cl atoms are replaced by phenyl radicals. The authors therefore initially analyzed the exchange reaction of diphenyl mercury with  $C_5H_5TiCl_3$  at a 3 to 1 ratio in a benzene solution at room temperature. The following new compounds were identified:



(1)  
(2)  
(3)

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ACCESSION NR: AP4040951



Authors conclude that the bonding of the titanium atom with the cyclopentadienyl ring in the examined compounds is very similar to a ferrocene bond. Orig. art. has: 11 Formulas.

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete im. N. I. Lobachevskogo (Scientific Research Institute for Chemistry of Gorki State University)

SUBMITTED: 17Feb64

ENCL: 00

SUB CODE: IC

NO REF SOV: 003

OTHER: 002

Card 2/2

RAZUVAYEV, G.A.; LATYAYEVA, V.N.; VYSHINSKAYA, L.I.

Decomposition of biscyclopentadienyl derivatives of titanium in solvents. Dokl. AN SSSR 159 no.2:383-384 N '64.

(MIRA 17:12)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete im. N.I. Lobachevskogo. 2. Chlen-korrespondent AN SSSR (for Razuvayev).

RAZUVAYEV, G.A.; LATYAYEVA, V.N.

Covalent organometallic compounds formed by transition metals.  
Usp.khim. 34 no.4:585-617 Ap '65. (MIRA 18:8)

1. Institut khimii pri Gor'kovskom gosudarstvennom universitete.

RAZUVAYEV, G.A.; LATYAYEVA, V.N.; VYSHINSKAYA, L.I.

Reactions of biscyclopentadienyldiphenyltitanium with benzyl  
chloride and triphenylchloromethane. Zhur. ob. Khim. 35 no.1:  
169-174 Ja '65. (MIRA 18:2)

PANKRATOVA, V.N.; LATYAYEVA, V.N.; RAZUVAYEV, G.A.

Oxidation of diphenylcadmium in organic solvents. Zhur. ob.  
khim. 35 no.5:900-903 My '65. (MIRA 18:6)

LATYAYEVA, V.N.; RAZUVAYEV, G.A.; KILYAKOVA, G.A.

Diphenyltitanium complexes with tetrahydrofuran and ammonia.  
Zhur. ob. khim. 35 no.8:1498-1499 Ag '65. (MIRA 18:8)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom  
gosudarstvennom universitet.



RAZUVAYEV, G.A.; MINSKER, K.S.; LATYAYEVA, V.N.; SANGALOV, Yu.A.

Polymerization of vinyl chloride initiated by the reaction of carbon tetrachloride with titanium organometallic compounds. Dokl. AN SSSR 163 no.4:906-908 Ag '65. (MIRA 18:8)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom Gosudarstvennom universitete im. N.I. Lobachevskogo. 2. Chlen-korrespondent AN SSSR (for Razuvayev).

L 42145-66 EWT(m)/EWP(j)/T IJP(c) WW/RM  
 ACC NR: AP6016846 (A) SOURCE CODE: UR/0026/66/000/005/0048/0053

AUTHOR: Razuvayev, G. A. (Corresponding member AN SSSR); Latyayeva, V. N.  
 (Candidate of chemical sciences)

ORG: Gor'kiy State University im. N. I. Lobachevskiy (Gor'kovskiy gosudarstvennyy universitet)

TITLE: New class of compounds. Research and discovery of organotitanium derivatives

SOURCE: Priroda, no. 5, 1966, 48-53

TOPIC TAGS: titanium, organotitanium compound, metal industry, pi bonded organo-metallic compound, chemical bonding, chemical synthesis, free radical, polymerization reaction mechanism, argon, biochemistry

ABSTRACT: This popular science type article reflects a special Soviet interest in titanium and its compounds. The summary of the article even states, that wide-spread opinion is being formed on replacing the "iron age" with the "titanium age". It is emphasized that the monument in Moscow erected to honor the conquerors of space is coated with this metal.

It is noted in the article that the use of metallic titanium and its alloys is handicapped by time-consuming and costly refining. However, since titanium is a transition element it is of considerable interest not only in its metallic form, but also in its organometallic compounds. The

UDC: 546.821

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L 42145-66

ACC NR: AP6016846

alkoxy titanium derivatives which are used for the preparation of heat resistant plastics, mainly due to the research made by Academician K. A. Andrianov, are mentioned first. 7

Secondly, the Ziegler-Natt catalysts are of considerable importance. It is emphasized that the organotitanium compounds supposedly formed in the course of the reactions promoted by these catalysts, and many other known compounds, e.g., biscyclopentadienyltitanium, belong to the class of the so-called "sandwich" compounds or metallocenes in which vacancies in the titanium atom shell are filled by  $\pi$ -electrons of organic radicals. However, true covalent organotitanium compounds were considered to be unattainable until attempts were made to synthesize them at very low temperatures and in an inert gas (argon) atmosphere. Thus, a new class of titanium compounds was obtained: mixed sandwich-covalent compounds and purely covalent compounds. A peculiarity of the latter is their intense color, which is contrary to the colorless covalent organic compounds of nontransition metals.

Covalent organotitanium compounds are not stable at room temperature, are easily oxidized in the air, and are hydrolyzed by moisture. In some cases, these compounds decompose according to the free radical mechanism and can initiate the polymerization of vinyl monomers. Another potential practical application of the reactivity of covalent organic compounds of titanium or some transition metals is the fixation of molecular nitrogen.

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L 42145-66

ACC NR: AP60

(e.g., atmospheric nitrogen) under mild conditions. This application is based on the research of doctor of chemical sciences M. Ye. Vol'pin. This also indicates that organotitanium syntheses are to be conducted in argon as a true inert gas. In some cases, a physiologic activity, e.g., the vasodilatory effect, is produced by organotitanium compounds. Further studies may indicate more fields of application of this new class of compounds. Orig. art. has: 4 figures. [ATD PRESS: 4261-F]

SUB CODE: 07, 11 / SUBM DATE: none / ORIG REF: 001

Card 3/3 *MLP*

L 11110-67 B71(M)/EAF(3) RM  
ACC NR: AP7003667

SOURCE CODE: UR/0079/66/036/008/1491/1498

AUTHOR: Razuvaev, G. A.; Latyayeva, V. N.; Vyshinskaya, L. I.; Kilyakova, G. A. 34  
ORG: Scientific Research Institute, Gor'kiy State University im. N. I.

Lobachevskiy (Nauchno-issledovatel'skiy institut pri gor'kovskom gosudarstvennom universitete)

TITLE: Some reactions of Bis-cyclopentadienyltitanium and monocyclopentadienyl-phenyltitanium

SOURCE: Zhurnal obshchey khimii v. 36, no. 8, 1966, 1491-1498

TOPIC TAGS: organotitanium compound, thermal decomposition, chemical bonding

ABSTRACT: In a study of whether thermal reactions of decomposition of pi-cyclopentadienyl compounds of tetravalent titanium are common for different R, and a comparison of the reactions of newly obtained cyclopentadienyl derivatives with the known reactions of tetraphenyl- and diphenyltitanium, the thermal decomposition of  $(C_5H_5)_2TiR_2$  was studied, where  $R = CH_3$ ,  $C_6H_5$ , and  $C_5H_5Ti(C_6H_5)_3$ .

Their reactions with halo-derivatives and oxidation were also studied, and the data obtained were compared with analogous data for tetraphenyltitanium. The new cyclopentadienyl compounds with tetravalent titanium  $(C_5H_5)_2TiR_2$ , when

heated, exhibited a cleavage of the Ti-R bond, forming titanium compounds of lower valence, analogously to tetraphenyltitanium, which breaks down into diphenyltitanium and diphenyl. The pi- $C_5H_5$ -Ti bond was unaffected. The

stability of the compounds to thermal decomposition increased in the series:  
 $(C_6H_5)_4Ti < (C_5H_5)Ti(C_6H_5)_3 < (C_5H_5)_2Ti(C_6H_5)_2$ .  $C_5H_5Ti(C_6H_5)_3$  was synthesized

Card 1/2

UDC: 547.1'3:546.821

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L 1111-54  
ACC NR: AP7003667

for the first time, and possessed one pi-bond  $C_5H_5-Ti$  and three sigma-bonds  $C_6H_5-Ti$ . The products of thermal decomposition:  $(C_6H_5)_2Ti$ ,  $C_5H_5TiC_6H_5$ , and  $(C_5H_5)_2Ti$  were more stable to the action of high temperatures, but were extremely readily oxidized. The reactions of  $(C_6H_5)_2Ti$ ,  $C_6H_5TiC_5H_5$ , and  $(C_5H_5)_2Ti$  with halo-derivatives included cleavage of the phenyltitanium bonds and their replacement by chlorine-titanium bonds. In the reaction of these compounds with chloroform, carbon tetrachloride, mercuric chloride, and hydrogen chloride, the  $C_5H_5Ti$  and  $(C_5H_5)_2Ti$  groups were unaffected. The titanium-containing final products were  $TiCl_4$ ,  $C_5H_5TiCl_3$ , and  $(C_5H_5)_2TiCl_2$ , respectively. The reactions of organotitanium compounds considered illustrate the relative stability of the pi-bond  $C_5H_5Ti$  to the action of temperatures, halo-derivatives and other reagents in comparison with the sigma-bond  $Ti-R$ . [JPRS: 38,970]

SUB CODE: 07 / SUBM DATE: 06Jul65 / ORIG REF: 007 / OTH REF: 003

Cord 2/2 jb

Upper Silesian industrial area of the Polish People's Republic.  
Geog. v shkole 21 no. 4:16-25 J1-Ag '58. (MIRA 11:7)  
(Poland--Industries)

LATYFOVA, Ye.Sh.

Characteristics of the production and territorial structure of  
Katowice Province. Vest. Mosk. un. Ser. 5: Geog. 19 no.1:50-55  
Ja-F '64. (MIRA 17:4)

1. Kafedra ekonomicheskoy geografii Moskovskogo finansovogo  
instituta.

LATYNIH, V.A., inzh.; BURYIN, M.S., inzh.

Precast panel construction. Biul. tekhn. inform. 3 no.10:23-28 0  
'57. (MIRA 10:12)  
(Precast concrete construction)



UMANSKIY, Semen Petrovich; LEVASHOV, V.V., kand. med. nauk,  
polkovnik, retsenzent; LATYNIN, Ye.B., red.

[Endurance barrier of a pilot] Bar'er vyнослиivosti let-  
chika. Moskva, Mashinostroenie, 1964. 169 p.  
(MIRA 18:1)

VASIL'YEV, G.S.; MIKIRTUMOV, E.B., kandidat tekhnicheskikh nauk, redaktor;  
LATYNIN, Ye.V., redaktor; ZUDAKIN, I.M., tekhnicheskiiy redaktor.

[Principles of flight applied to airplane models with flapping wings] Osnovy poleta modelei s mashushchimi kryl'iami. Pod red. E.B.Mikirtumova. Moskva, Gos. izd-vo oboronnoi promyshl., 1953. 123 p. [Microfilm] (MLRA 7:10)  
(Airplanes--Models) (Flight)

LATYNIN, Ye.V.,

MEZNIKOV, L.I.; EVENCHIK, E.Ye.; YENOKHOVICH, A.S.; SOKOLOVA, Ye.N.;  
RESNYANSKIY, F.M.; SKLYANKIN, A.N.; USOVA, A.V.; LATYNIN, Ye.V.,  
redaktor; Mukhina, T.N., tekhnicheskiy redaktor

[Industrial excursions in physics; a handbook for teachers]  
Proizvodstvennye ekskursii po fizike; posobie dlia uchitelei.  
Moskva, Izd-vo Akad. pedagog. nauk RSFSR, 1954. 233 p. (MIRA 8:5)  
(Physics--Study and teaching)(School excursions)  
(Technology)

LATYKH, Ye. V.

ARDAB'YEVSKIY, A.I.; VOROPAYEVA, V.G.; GRINEVA, K.I.; VISHNEVSKIY, A.Ya.,  
inzhener, redaktor: LATYKH, Ye. V., inzhener, zaveduyushchiy  
redaktsiyey: SHEKHTMAN, E.A., izdatel'skiy redaktor; ROZHIN, V.P.,  
tekhnicheskoy redaktor.

[Manual on calculations for super-high frequency antennas] Posobie  
po raschetu anten sverkhvysokikh chastot. Pod obshchey red. K.I.  
Grinevoi. Moskva, Gos. izd-vo obor. promyshl. 1957. 70 p.

(MLRA 10:4)

(Antennas (Electronics))